notes

- Review of work we have done already

work

- Analysis of term in thermodynamic equation

experiments

- Experiments with CAM2
  - Spin up
    - Forecast analysis NCAR and PCMDI ERA40
      - Full field, state variables, starting from own state
    - Nudging
- Is any one better than the other?
  - Forecasts April, July 1997 full IOPs using ERA 40
    1. Forecast Analysis LLNL
    2. Nudging LLNL
    3. Climatological for everything except state variables NCAR
  - Redo with NCEP reanalysis - quick study

Actions

- NCAR to furnish interpolation to LLNL
  - Vertical - ECMWF, quasi cubic for water, spectral for state – import NCL script(?)
- LLNL gives NCAR ISCCP simulator as LLNL has implemented. (54+ variables) 2 new variables for history tape
- Spin-up and forecast experiments

standards

- Length of forecast- 7 days
- Start from 0Z
  - Later - test another start time
- CAM2.0 version
- Output list
  - Hourly (see list) and 3-hourly
    - PBL height
    - Diurnal cycle variables
  - ISCCP simulator (3 hour)
- Naming conventions only 3 cases

Diurnal cycle study restricted to ARM site

- Physical processes in column
- Land spin-up how good?
  - Surface fluxes volumetric soil moisture
  - What output in model is equivalent?
- Catalogue field experiments data format issue, availability(?) – Tom
- GSM study parallel the CAM2 model – Mike
- Shaocheng will provide hourly ARM data
- It the growth of the short-term bias related to systematic errors in climate?
- Thermodynamic terms compared to ARM everybody
- Water vapor, surface fluxes, etc. is convection cause or something else?

Assignments

- NWP metrics basic WMO skill scores – Dave
- Short and long term systematic error production – Mike
- Land spin-up compared to ARM – Dave and Tom
- Surface heat budget – Jerry, Jim, Jay , Shaocheng, Dave, Tom cloud radiative, surface and column
- Column water budget, Jim, ARM + US as well.
- Boundary layer issues – Julie, Ric
- Convection scheme, Shaocheng – possible parameterization test
- Collection of all relevant data – Shaocheng, Tom, and Mike
- Comparison of ISCCP simulator clouds with CAM2 –global, Shaocheng, Jim, Jay

Other bias

Status of diagnostics – Mike F.

- GSM protocol, initialization, time period, forecast frequency, compare with ARM
  - Assess quality of forecast
  - Nudging into R2 model generate initial conditions,
  - Increment adjustment
  - Dependent on R2 or ERA40
  - Resolution

Dave

- Forecast with climatological land ERA40 –t42 skill scores
  - – Scores 500 rms & bias mslp tropical wind rms
    - July 37 meters 1997 72 hours-
    - 56 models 57-72
  - – In the ball park at T42 only state from analysis
  - – Land is July climatology
  - – Mapping based on ECMWF

Jim analysis

- Land spin-up soil moisture
- Precip convection
- Analysis of CAPE

Shaocheng

- Single column compare with CAPT
- Closure tests (Xie)
  - Trigger mechanism